

Contents

1 Routine/Function Prologues	2
1.0.1 interp_cmap.F90 (Source File: interp_cmap.F90)	2

1 Routine/Function Prologues

1.0.1 interp_cmap.F90 (Source File: interp_cmap.F90)

Interpolates CMAP observed precipitation forcing

INTERFACE:

```
subroutine interp_cmap(kpds,kgds,ngdas,f,lb,lis_gds,nc,nr, &
                      varfield)
```

USES:

```
use cmapdomain_module, only : mi,w11,w12,w21,w22,&
                           n11,n12,n21,n22,rlat,rlon

implicit none
```

ARGUMENTS:

```
integer :: nc, nr, ngdas, nglis
integer :: kpds(200),kgds(200), lis_gds(200)
real :: f(ngdas)
logical*1 :: lb(ngdas)
real, dimension(nc,nr) :: varfield
```

CONTENTS:

```
!-----
! Setting interpolation options (ip=0,bilinear)
! (km=1, one parameter, ibi=1,use undefined bitmap
! (needed for soil moisture and temperature only)
! Use budget bilinear (ip=3) for precip forcing fields
!-----
nglis = nc*nr
if (kpds(5)==59 .or. kpds(5)==214) then
    ip=3
    ipopt(1)=-1
    ipopt(2)=-1
    km=1
    ibi=1
else
    ip=0
    do i=1,20
        ipopt(i)=0
    enddo
    km=1
    ibi=1
endif
!-----
! Initialize output bitmap. Important for soil moisture and temp.
```

```
!-----
lo = .true.

!  call ipolates (ip,ipopt,kgds,lis_gds,ngdas,nlis, &
!      km,ibi,lb,f,no,rlat,rlon,ibo,lo,lis1d,iret)
mi = ngdas
call polates0 (lis_gds,ibi,lb,f,ibo,lo,lis1d,mi,&
    rlat, rlon,w11,w12,w21,w22,n11,n12,n21,n22,iret)
!-----
! Create 2D array for main program. Also define a "soil" mask
! due to different geography between GDAS & LDAS. For LDAS land
! points not included in GDAS geography dataset only.
!-----
count = 0
do j = 1, nr
    do i = 1, nc
        varfield(i,j) = lis1d(i+count)
        geogmask(i,j) = lo(i+count)
    enddo
    count = count + nc
enddo
!-----
! Save air tempertaure interpolated field for later use in
! initialization of soil temp where geography differs
! between GDAS and LDAS
!-----
if (kpds(5) .eq. 11 .and. kpds(6) .eq. 105) then
    do i = 1, nc
        do j = 1, nr
            geogtemp(i,j) = varfield(i,j)
        enddo
    enddo
endif
```